INCREASING THROUGH-PUT OF A STORAGE CONTROLLER BY AUTONOMICALLY ADJUSTING HOST DELAY

ABSTRACT

[19]   A data storage control unit is coupled to one or more host devices and to one or more physical storage units, the physical storage units collectives configured as a plurality of logical storage ranks. The storage control unit receives and processes write requests from the host devices and directs that data updates be stored in a temporary storage. The data updates are subsequently destaged to the logical ranks. Write requests are processed at a predetermined rate relative to the rate at which destages are performed (destage mode or rate). The storage control unit evaluates workload conditions of the temporary storage and modifies the destage mode if the temporary storage is in danger of becoming backlogged or if an actual backlog is created, thereby applying a "throttle" to the host write requests. Thus, method, apparatus and program product are provided to dynamically modify a level of throttling whereby through-put of a host device is substantially maintained.